

REMARKS

The Applicants appreciate the time and consideration that the Examiner has extended in reviewing this application. By the foregoing amendments, the Applicants have canceled claims 20-42. Claims 53, 57, 58, 59, 65, 69, 73, 74, 84, 88, 89, 96 and 103 have been amended. New claims 104 and 105 have been added. Also, withdrawn claims 75-83 have been amended for the Examiner's consideration for purposes of rejoinder, should the Examiner deem claims 53-74 and 84-105 allowable.

In the Office Action dated January 2, 2004, the Examiner objected to the claims for use of the terms "PETG" and "PCTG". By the above amendments, the Applicants have replaced all instances of the term "PETG" with the fully written out phrase "polyethylene terephthalate glycol," and "PCTG" with the fully written out phrase "polycyclohexanedimethyl terephthalate glycol." The Examiner also rejected the claims under 35 U.S.C. § 112 for the improper markush grouping in claims 58 and 73. Claims 58 and 73 have now been amended to recite proper markush grouping. Accordingly, Applicants respectfully request that the Examiner withdraw the objections to the claims and the rejections under 35 U.S.C. § 112.

In the Office Action dated January 2, 2004, the Examiner also rejected claims 53, 55, 57, 65, 67, 69, 84, 86, 88 and 90 under 35 U.S.C. § 102(b) as being anticipated by Eckart et al., (U.S. Pat. No. 5,643,666) ("Eckart"). The Applicants respectfully traverse these rejections.

A claim is anticipated under § 102(b) only if each and every element as set forth in a claim is found, either expressly or inherently described, in a single prior art reference. MPEP § 2131. As amended, independent claims 53, 65 and 84 recite a decorative layer comprising a

thermosetting resin impregnated cellulosic material. As those with skill in the art will recognize, such impregnation may occur before lamination or during the lamination process (due to migration of resin from an adjacent layer) and that such impregnation does not necessarily saturate or uniformly distribute such resin.

Eckart does not disclose, teach or suggest, either expressly or inherently, a decorative layer comprising a thermosetting resin impregnated cellulosic material (as claimed in amended claims 53, 65 and 84). Indeed, Eckart teaches away from such thermosetting resin impregnated cellulosic materials by teaching that all layers of the Eckart laminate must be thermally compatible, thermoplastic polymeric materials so that the laminate can be subsequently thermoformed. (See Col. 2, Ins. 36-41; Col. 3, ln. 66 - Col. 4, ln. 80; Col. 5, Ins. 4-7; Col. 4, Ins. 58-65; and Col. 7, ln. 66 - Col. 8, ln. 4). Thus, in contrast to the layers of Eckart, which must be thermoplastic and thermally compatible, the present invention, as claimed in independent claims 53, 65 and 84, recite that at least one layer of the laminate comprises a thermosetting resin impregnated cellulosic material. As those with skill in the art will recognize, such a *thermosetting* resin impregnated cellulosic material, whether such impregnation occurs before lamination or *in situ* during the laminating process (both of such techniques being covered by the present claims), by nature is not thermally compatible with the claimed core layer comprising polyethylene terephthalate glycol ("PETG") (in claims 53 and 65), a *thermoplastic* material. Moreover, as a result of the presence of at least such a thermosetting resin, the laminate of the present invention is not thermoformable, in direct contrast to the teaching of Eckart. Accordingly, because Eckart does not disclose, teach or suggest a laminate having a PETG layer or a polymeric material combined with a layer comprising thermosetting resin impregnated cellulosic material and, in fact, teaches away from such a combination, the Applicants

respectfully request that the Examiner withdraw the 35 U.S.C. § 102(b) rejections to claims 53, 65 and 84, as amended, and all claims depending therefrom.

In the Office Action dated January 2, 2004, the Examiner rejected claims 53-63, 65-71, 73, 74, 84-88, 90-94, 96, 97-99 and 100-103 under 35 U.S.C. § 103(a) as being unpatentable over Min (U.S. Pat. No. 6,093,473) (“Min”) in view of Eckart. Although the Examiner admits that Min does not teach a core layer comprising PETG, the Examiner states that “it would have been obvious to one having skill in the art at the time the invention was made to use the specific PETG copolyester taught by Eckart et al. to form the core layer in the decorative laminate of Min.” The Applicants respectfully traverse these rejections.

In order to prove a prima facie case of obviousness under § 103(a), three basic criteria must be met: (1) there must be some suggestion or motivation to modify the references; (2) there must be a reasonable expectation of success; and (3) the references must teach or suggest all of the claim limitations. MPEP § 2143. As stated in more detail below, there is no suggestion whatsoever in the references cited by the Examiner to take a non-fibrous, non-impregnable material such as a PETG (or polymeric) sheet or film and use the same as a core layer in a laminate having at least one other layer comprising a thermosetting resin impregnated cellulosic material, as currently claimed, nor would there have been any reasonable expectation of success of such a combination.

Although PETG was available as a material at the time the Min patent was filed (April 23, 1998), Min did not disclose, teach or suggest a PETG or other polymeric thermoplastic film or sheet material as an alternative material for its core layer. This is because decorative laminates, and particularly the high pressure decorative laminates preferred by Min in the practice of his invention, have historically been based on bonding together various fibrous sheets

or mats with various thermosetting resins or polymers, whether glass fabric with epoxy resin, kraft paper or cotton fabric with phenolic resin, alpha cellulose sheets with melamine resin, glass mat with polyester resins, or myriad combinations thereof, to obtain rigid, very heat resistant, unitary laminate composites.

This lamination process basically relied on the ability to impregnate the voids within the fibrous sheets with thermosetting resins, or alternatively using some untreated fibrous sheets in conjunction with resin-rich adjacent fibrous sheets, in which the latter could then donate their excess resin to them *in situ* with pressure and temperature induced flow of the resins during the laminating process, prior to cure of the resins. Use of a polymeric sheet or film, without the prerequisite inter-fiber voids, would be incapable of accepting resin and becoming filled, either by impregnation prior to pressing, or by resin donation during pressing. As such, before the present invention, it was not known that a non-fibrous, non-impregnable and thermally (and chemically) incompatible PETG or polymeric core layer, could be satisfactorily bonded to an adjacent thermosetting resin containing (by direct or indirect impregnation) decorative layer.

Indeed, Min only teaches the use of a variety of fibrous core materials, which core materials are necessarily impregnated, either directly or indirectly, with a thermosetting resin, and fails to teach a core layer comprising one or more sheets of non-fibrous, non-impregnable PETG or polymeric film. This is confirmed by looking at the statement in Min that the “core layer can include paper sheets, such as kraft paper sheets, which are typically impregnated with a resin, such as phenolic resin. The core layer can also include one or more additional layers formed from fiberglass, polypropylene, polyester, nylon, carbon fiber . . . [where] the additional layer may also be comprised of woven or nonwoven sheets and these sheets may or may not be impregnated with a resin, such as phenol[ic]. Also, the core layer may be composed solely of

these sheets, thus eliminating the use of kraft paper sheets.” (See Col. 3, lns. 1-11; Col. 7, lines 45-55).

Although Min states that the additional core layers may not be impregnated by a resin, Min makes clear that such a layer, although perhaps not initially impregnated with a resin, is impregnable and will become impregnated during the lamination process. Indeed, Min states that “a preferred arrangement for the core layer . . . is to provide two sheets of resin impregnated paper and to sandwich one of the abovementioned additional layers between these paper layers. *The additional layer may or may not be initially impregnated with resin. During pressing of the laminate, the resin in the paper sheets migrates into this additional layer,* [where] a preferred additional layer comprises a fiberglass layer” (See Col. 7, lns. 59-66) (emphasis added).

Thus, as established above, Min only teaches a core layer that is fibrous in nature and is capable to being impregnated, either initially or *in situ* during subsequent lamination. This is diametrically opposed to the present invention, where there is a core layer comprising a non-fibrous, non-impregnable layer of PETG or polymeric material. Given that Min teaches away from such a layer and, as described above, Eckart teaches away from the use of thermosetting resin impregnated cellulosic materials, there is no suggestion in the art to combine Min with Eckart as the Examiner proposes. Accordingly, for the above reasons, the Applicants respectfully submit that it would not have been obvious in light of Min and Eckart, or any other art of record, to create a laminate containing a PETG or polymeric material core layer and a layer having a thermosetting resin impregnated cellulosic material. The Applicants therefore respectfully request that the Examiner withdraw all rejection under 35 U.S.C. § 103.

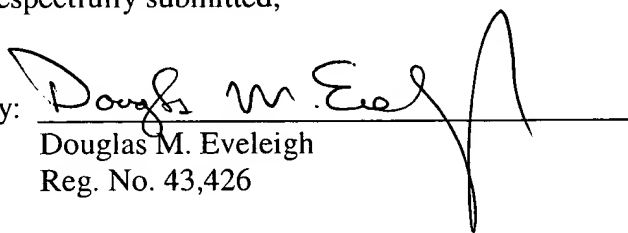
Applicants have also submitted herewith new claims 104 and 105, which the Applicants respectfully submit are in condition for allowance.

CONCLUSION

In conclusion, and in view of the remarks set forth above, Applicants respectfully submit that the application and the claims are in condition for allowance and respectfully request favorable consideration and the timely allowance of all pending claims. If, for any reason, the application and claims are not in condition for allowance, or any additional information is required, the Examiner is invited to contact the undersigned at (312) 701-8738. The Commissioner is hereby authorized to charge any additional fees (or credit any overpayment) associated with this communication to our Deposit Account No. 13-0019. If a fee is required for an extension of time under 37 C.F.R. 1.136 not accounted for above, such extension is requested and should also be charged to our Deposit Account.

Respectfully submitted,

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